

Simplified Measures for Merchant Shipping (Prevention of Air Pollution) Regulation

1. Local Vessels Safety Section, Marine Department, HKSAR.
2. International Convention for the Prevention of Pollution Annex VI (MARPOL VI) for the prevention of air pollution from ships comes into force internationally on 19 May 2005. MARPOL VI requirements will apply to all vessels (including fishing vessel and pleasure vessel).
3. Main requirements of MARPOL VI:
Deliberate emission of ozone depleting substances including halons and chlorofluorocarbons (CFCs) will be prohibited. Also, new installations containing ozone-depleting substances will be prohibited on all ships. However, new installations containing hydro-chlorofluorocarbons (HCFCs) may be allowed until 1 January 2020.
4. The sulphur content (SO_x) of fuel oil and fuel oil quality
A global cap of 4.5% m/m on the sulphur content of fuel oil used on board ships together with limitation of sulphur oxide emissions from ship exhausts will be imposed. There will be designated “SO_x Emission Control Areas” that may impose more stringent sulphur oxide emission controls. In these areas, the sulphur content of fuel oil used onboard ships must not exceed 1.5% m/m, unless the ship is fitted with an exhaust gas cleaning system (or by using other technological methods) to limit its SO_x emission.

The fuel oil quality must comply with MARPOL VI specified requirements. Sample of fuel oil shall be kept onboard for 3 years.

5. Emission of Nitrogen Oxides (NO_x)
The control of nitrogen oxide (NO_x) emission applies to diesel engines with output power of more than 130 kW excluding the emergency diesel engine. The contents relating to the emission of nitrogen oxide (NO_x) as follows :

6.

	Rated Engine Speed (n) [crankshaft revolutions per minute (rpm)]	Maximum allowable NO _x emissions (g/kWh)
(i)	$n < 130$	17
(ii)	$130 \leq n < 2000$	$45 n^{-0.2}$
(iii)	$n \geq 2000$	9.8

7. Volatile organic compound emission

Emission control of volatile organic compound in any designated port and terminal is enforced by the local Administration.

8. Incinerator

To control the shipboard incinerator and the substance of incineration, such as

- (a) where the substance for incineration is polyvinyl chlorides, the incineration must be IMO approved type;
- (b) strict operation procedures and operation manual to be kept on board;
- (c) the operator of the incinerator must undergo specified training...etc.

9. International Air Pollution Prevention Certificate

For self-propelled vessels of 400 gross tonnage and above are to be issued with an International Air Pollution Prevention Certificate (IAPP).

All engines installed on board with power output greater than 130kW will be required to be issued with Engine International Air Pollution Prevention Certificate (EIAPP) for Diesel Engine and Technical File.

10. Legislation in Hong Kong

Merchant Shipping (Prevention of Air Pollution) Regulation was published in Gazette on 6 July 2007.

http://www.gld.gov.hk/cgi-bin/gld/egazette/gazettefiles.cgi?lang=e&year=2007&month=7&day=6&vol=11&no=27&gn=149&header=1&part=0&df=1&nt=s2&newfile=1&acurrentpage=12&agree=1&gaz_type=ls2

Made under Laws of Hong Kong, Chapter 413 subsidiary legislation.

Anticipated to enter into force at the second quarter of 2008.

11. The requirements stipulated in the Merchant Shipping (Prevention of Air Pollution) Regulation for convention ships are identical to that of MARPOL VI. Regarding local vessels trading in non international voyages, Marine Department has consulted with neighbour maritime authorities (e.g. Guangdong Maritime Safety Administration (GDMSA)) and then set up a series of simplified measures without impairing the principle of MARPOL VI.

12. Measures set up by Hong Kong Marine Department and GDMSA

Having considered that the non-convention ships plying between Guangdong province and Hong Kong is a special route, Marine Department discussed with GDMSA to set up the following simplified requirements. Such measures are also applicable to vessels operating to Hong Kong from other provinces and Macau.

13. Ozone Depleting Substances

Sample for "Guidance on Management and Handling of Ozone Depleting Substances" (Annex I) should be stamped by ship's management company and exhibited in conspicuous position on board ship.

Any handling of Ozone Depleting Substances system shall be clearly recorded and kept on board.

14. The sulphur content of fuel oil and fuel oil quality

For vessels less than 400 gross tonnage, there is no need to keep the bunker delivery record.

For vessels of 400 gross tonnage or above, the bunker delivery record should keep for one year.

If the fuel oil is heavy grade fuel oil, irrespective of the gross tonnage, the sample shall be kept on board until the fuel oil is consumed but anyway not shorter than one year after the heavy fuel bunkered to the vessel.

Under appropriate condition/situation, the delivery note and sample requirements may be exempted upon application.

15. Emission of Nitrogen Oxide (NO_x)

The requirements of nitrogen oxide emission are not applicable to “existing vessels” or “existing diesel engines”.

16. Emission of Nitrogen Oxide (NO_x)

Definition of “existing vessels”

- (a) (i) The vessel already issued with safety certificate or Operating Licence and trading to Hong Kong before the commencement date of the Regulation or
- (ii) the owner has notified the Administration that his vessel will trade to Hong Kong if a new vessel has been keel laid within 12 months before the commencement date of the Regulation and

17.

- (b) The vessel of the above (i) or (ii) does not undergo any one of the following alterations after the commencement date of the Regulation:
 - (i) the vessel’s length, breadth or depth is altered;
 - (ii) during the replacement of main propulsion engine(s), the output is increased by 10% or more than what is recorded in its safety certificate;
 - (iii) particulars relating to the materials, scantlings or design of the propulsion shafting or stern tube, as shown in the plans approved are no longer accurate;
 - (iv) alter the vessel’s class, type or category.

18. Emission of Nitrogen Oxide (NO_x)

Definition of “existing diesel engine”:

The diesel engines (main or auxiliary) are operating on existing vessels or

The spare diesel engines have already recorded in the registration system by the Administration.

19. Registration procedure for “Existing Diesel Engine” is only applicable to local vessels and signed by the owner.
20. Marine Department will cease to accept any “Declaration for existing diesel engine” on or

after the commencement date of the Regulation.

21. One diesel engine (more than 130 kW and not for emergency use) which is already fitted onboard, maximum one spare engine of the same brand, model, revolution direction and power can be registered.
22. “Declaration for Existing Diesel Engine” (Annex II & III)
When filling this Declaration, the vessel had already installed with the diesel engine(s); spare diesel engine already available (relevant document shall be attached such as repair record, invoice etc.; and photo that can clearly show the brand, model, serial number and the complete engine).
23. “Declaration for Existing Diesel Engine” is true and inerrable;
the shipowner shall bear the legal liabilities;
the owner shall provide further documents for verification upon MD request;
to arrange MD to verify or carry out visit/check on-site.
24. Volatile organic compound
As there is very small amount of volatile organic compounds involving in Hong Kong, emission control does not put in force at present stage.
25. Incinerator
The incinerator installed on board can only be allowed to operate within the waters of Hong Kong if the incinerator complies with the IMO standards and fulfill its operating procedures.
Incinerator not IMO standards is strictly prohibited to operate.
26. Survey and Endorsement on safety certificate
After the commencement date of the Regulation, the vessels operating in coastal/river trade shall comply with the relevant inspection requirements during the periodical survey by the licensing or registration Maritime Authority.
The first survey is to be conducted within one year after the commencement date of the Regulation.
Having carried out the survey satisfactorily in respect of coastal/river trade vessels relates to the requirements of this Regulation, the relevant Maritime Authority will make an endorsement on safety certificate (e.g. Certificate of Ship Survey 船舶檢驗證書).
Having carried out the survey satisfactorily in respect of Hong Kong local licensed vessels relates to the requirements of this Regulation, Hong Kong Marine Department will make an endorsement on Certificate of Survey.
27. Survey Item
To ensure the safety certificate or Certificate of Survey in relation to the items of Regulation have been endorsed.
To verify the particulars of existing diesel engine onboard have granted exemption of the emission of NOx.

28. “Guidance on Management and Handling of Ozone Depleting Substances” shall be exhibited in conspicuous position and kept its relevant records (if any).
New installations containing ozone-depleting substances are prohibited on all ships. However, new installations containing hydro-chlorofluorocarbons (HCFCs) may be allowed until 1 January 2020.
29. Is there any incinerator onboard? The incinerator complies with IMO standards?
If the incinerator is in compliance with IMO standard, the operation of incinerator follows relevant requirements?
30. Checking of bunker delivery record
For vessels less than 400 gross tonnage, there is no need to keep the bunker delivery record.
For vessels of 400 gross tonnage or above, the bunker delivery record should keep for one year.
If the fuel oil is heavy grade fuel oil, irrespective of the gross tonnage, the sample shall be kept on board until the fuel oil is consumed but anyway not shorter than one year after the heavy fuel bunkered to the vessel.
31. Hong Kong Air Pollution Prevention Certificate (HKAPP)
The requirements of existing Hong Kong local licensed vessels:
Vessels of self-propelled and 400 gross tonnage or above, shall be issued with HKAPP not later than the first scheduled dry-docking after the commencement date or one year after the commencement date, whichever is earlier.
32. Enquiries for prevention of air pollution of local vessels:
Local Vessels Safety Section, Marine Department
Tel: (852) 2852 4430; 2852 4431; 2852 4591
Fax: (852) 2542 4679
E-mail: lvs1@mardep.gov.hk lvs2@mardep.gov.hk

Sample

Annex I

Merchant Shipping (Prevention of Air Pollution) Regulation (Chapter 413 sub-leg) Guidance on Management and Handling of Ozone Depleting Substances for coastal/river trade vessels visiting Hong Kong

- 1. Ozone depleting substance** means any controlled substance defined in the article of the Montreal Protocol, 1987; such as
 - Halon (1211, 1301, 2402 or 114B2 and others)
 - Chlorofluorocarbons (CFCs) (Freon-11, -12, -113, -114 and -115 etc.)
 - Hydrochlorofluorocarbons (HCFCs) (-22, 141b and 142b etc.)

- 2. New Installation**
 - 2.1. New installation on all ships are prohibited to contain ozone depleting substances, including new portable or fixed fire-extinguishing units, insulation, or other material, but does not include the repair or recharge of previously installed systems, equipment, insulation, or other material, or recharge of portable fire-extinguishing units, installed before the commencement of the Merchant Shipping (Prevention of air pollution) Regulation.
 - 2.2. However, new installation containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020. Relevant installation of new installation must be carried out by competent contractor.

- 3. Existing Installation**
 - 3.1. In the course of maintaining, servicing, repairing or disposing of all shipboard systems or equipment containing ozone depleting substances, deliberate emissions of ozone depleting substances are prohibited. Reception of ozone depleting substance must be received by competent reception facility/contractor.
 - 3.2. Systems or equipment containing ozone depleting substances must be regularly tested for leakage to ensure no leakage of ozone depleting substance.
 - 3.3. In case of a suspected leakage, report immediately according to procedure and carry out maintenance as earliest as possible, detail of maintenance must be recorded in the record book.

- 4. Record**
 - 4.1. Record covering all shipboard systems or equipment containing ozone depleting substances, including maintenance, inspection, repair, dispose, gas recharge, reception and leak test, etc shall be established.
 - 4.2. All records (if any) must be properly maintained and kept in order.

- 5. Guidance practice**

Fixed or portable fire-extinguishing units, fridge and air condition system:
In order to prevent the act of deliberate emission of ozone depleting substance, relevant operator must obey the following practice:

 - 5.1. During operation:
 - (a) regularly conduct leak test inspection on system and spare bottle;
 - (b) ensure the cooling water system and high pressure cutout work properly on fridge and air conditioning system;
 - (c) before carrying out any system maintenance, confirm that the maintenance port has the reception facilities of ozone depleting substance;
 - 5.2. System dismantle:

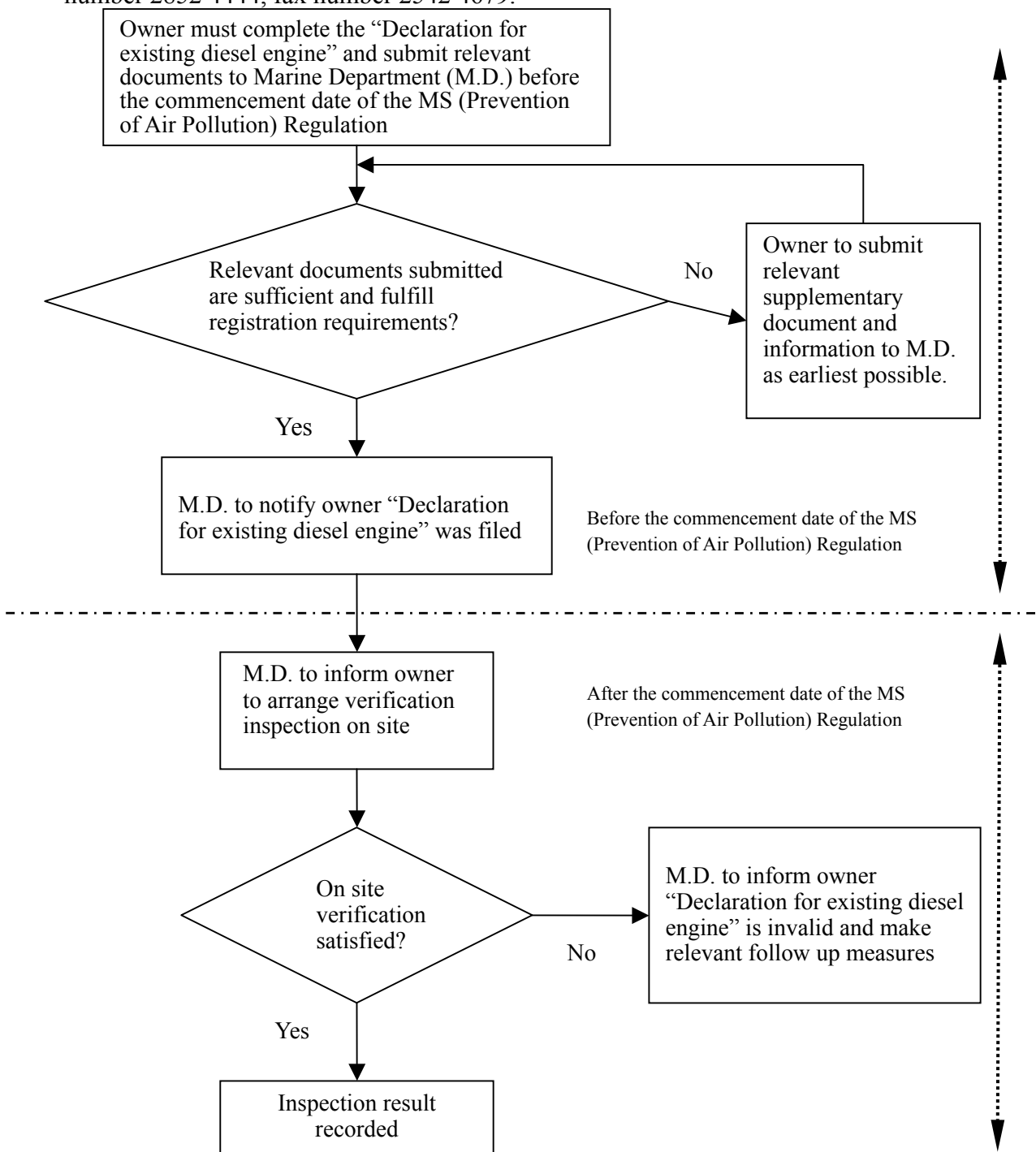
Before dismantle, ozone depleting substance in the system must be collected and removed from the vessel, and delivered to reception station for disposal.

Name of vessel : _____ Company stamp : _____

Registration Procedure for “Existing Diesel Engine”

This registration procedure for “Existing Diesel Engine” is applicable to local licensed vessels and signed by the owner.

1. Marine Department will cease to accept any “Declaration for existing diesel engine” on or after the commencement date of the Merchant Shipping (Prevention of Air Pollution) Regulation;
2. One diesel engine (more than 130 kW and not for emergency use) which is already fitted onboard, maximum one spare engine of the same brand, model, revolution direction and power can be registered.
3. If owner of the vessel intends to apply for registration of “existing diesel engine” (including diesel engines already fitted onboard and spare engines) of his vessel, he shall apply to Marine Department according to the following procedure. For enquiries, please contact telephone number 2852 4444, fax number 2542 4679.



Declaration for Existing Diesel Engine

1. Particulars of locally licensed vessel :

Certificate of Ownership Number..... Name of Owner.....
Name of vessel..... Class..... Type..... Category.....

2. I declare that the above mentioned vessel,

(a) before completing this declaration, the vessel had already installed with the following diesel engine(s) (more than 130 kW) :

Item	Brand	Model	Serial number	Power(kW)	RPM
1.					
2.					
3.					
4.					
5.					

(b) already had the following spare diesel engine (more than 130kW) (relevant document shall be attached such as repair record, invoice etc.; and photo that can clearly show the brand, model, serial number and the complete diesel engine) :

Item	Brand	Model	Serial number	Power (kW)	RPM	Date of purchase	Stored at (Shipyards, engine workshop, godown)	Address, contact person and telephone number of shipyard, engine workshop, godown
1.								
2.								
3.								
4.								
5.								

3. Name of owner _____ Contact telephone or fax number _____
Address _____

This is to declare that:

- (a) I am the owner of the above mentioned vessel;
- (b) All information submitted in this “Declaration” is true and inerrable;
- (c) I understand that making false statement in any circumstance in this “Declaration” may lead to legal liability; and
- (d) I agree Marine Department to check the above information. Under the Marine Department request, I will provide other documents, coordinate and arrange Marine Department to verify or carry out inspection for any related matter.

Signature of owner: _____ Date: _____